



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,712	12/17/2001	Stephen H. Hall	10559-542001/ P12562	4792

20985 7590 10/08/2003

FISH & RICHARDSON, PC
4350 LA JOLLA VILLAGE DRIVE
SUITE 500
SAN DIEGO, CA 92122

EXAMINER

CHO, JAMES HYONCHOL

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/015,712

Applicant(s)

HALL, STEPHEN H.

Examiner

James Cho

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 15-21 is/are allowed.
- 6) ☒ Claim(s) 10, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 23 June 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed June 23, 2003.

Drawings

2. The drawings were received on June 23, 2003. These drawings are not approved because the short circuits represented as 118 and 120 of Fig. 3 is a new matter.

Specification

3. The amendment filed June 23, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the short circuits 118 and 120 by which the slot 108 is being terminated to reference plane are a new matter since the original disclosure was silent on how the slot 108 is being terminated or rather the original disclosure merely discussed that the slot 108 is terminated.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

4. Claims 1 and 15 are objected to because of the following informalities:

In claims 1 and 15, "transmission" on line 9 appears to be --transmission line-- respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 10, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Claims 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Phelan (US PAT No. 3,771,075).

Regarding claim 10, Figs. 1-3 of Phelan teaches a method comprising in a bus (transmission line strips 15), sourcing a current being representative of binary data on to a first line (15 is provided with signals; the signals being binary data is intended use and it has been held that a recitation directed to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).), inducing a return current on a reference plane (the signal travels over 15 and a coupling slot which is coupled to the ground plane 13 and faces another 15 and it is inherent that when a signal faces a different type of conductor medium, the signal gets reflected in the form of current); and transferring energy of the return current to a slot in the reference plane (the reflected current transfers the energy back to the slot which is coupled to the ground plane 13; Fig. 3 illustrate how signal is propagated along the microstrip lines in a transverse electromagnetic mode when coupled).

Regarding claim 12, Figs. 1-3 of Phelan teaches the method of claim 10 in which sourcing is generated by a driving agent (Fig. 6 shows a phased array antenna being driving agent for sourcing the input signal to microstrip; col. 4, lines 25-36).

Regarding claim 13, Figs. 1-3 of Phelan teaches the method of claim 12 in which the driving agent is a processor (a phased array antenna inherently transmits output signals and receive input signals, i.e. the antenna processes signals).

Allowable Subject Matter

6. Claims 1-9 and 15-21 are allowable over the prior art of record if written to overcome claim objections stated above.

Claims 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: Although, Phelan (US PAT No. 3,771,075) teaches a coupling arrangement with a slot, and Williams (US PAT No. 6,133,795) teaches converting IF signal to a digital signal using an IF amplifier and ADC, one of ordinary skill in the art would not have been motivated to modify the teachings of Phelan and/or Williams to further include, among other things, the specifics of generating a binary digital signal from the transient voltage pulse received on the transmission line, as set forth in the claims.

Response to Arguments

7. Applicant's arguments filed June 23, 2003 have been fully considered but they are not persuasive regarding claims 10, 12 and 13.

On page 9 of the amendment, applicant argues that "Phelan does describe or suggest "inducing a return current on a reference plane; and transferring energy of the return current to a slot in the reference plane". However, the examiner notes that when a signal traveling on a conductor medium faces a different type of conductor medium, the signal is inherently reflected which causes and induces undesirable return signal in the form of current. And the returned signal inherently travels to the lowest resistance place, i.e. a ground plane, since the slot is coupled to the ground plane. The examiner wholly concurs with applicant assertion that two microstrip lines being electromagnetically coupled are different from inducing the current on a reference plane. The electronmagnetically coupling only illustrates how the signal is coupled between two conductors 15 over the slot. Examiner further notes that when the signal travels over the slot, the reflected signal at the second conductor 15 induces the return current which is a byproduct of a signal when the signal faces different medium having its own conductance, which is inherent in the signal traveling on a conductor. Therefore, Phelan teaches all limitations of claims 10, 12 and 13.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2819

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Cho whose telephone number is 703-306-5442. The examiner can normally be reached on Monday-Friday, 05:30am-02:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 703-305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



James H. Cho
Examiner
Art Unit 2819

September 29, 2003